REMARKS

Applicant amends claims 1, 7, 11, and 18-20 and adds claims 21-26. Claims 1-26 are now pending in this application.

Examiner Interview

Applicant thanks the Examiner for granting the June 17, 2008 telephonic interview with Applicant's representative. During the interview, the claims and cited references were discussed. No agreement was reached.

Rejection of Claims 1-20 under 35 U.S.C. § 101

The Examiner rejected claims 1-20 under 35 U.S.C. § 101 as directed to non-statutory subject matter. Applicant respectfully disagrees. However, in order to advance prosecution, Applicant has amended independent claims 1, 7, 11, and 18-20 to recite an imaging device according to the Examiner's suggestion, found on pages 4-5 of the Office Action. Accordingly, Applicant respectfully requests that the rejection of claims 1-20 under 35 U.S.C. § 101 be withdrawn.

Rejection of Claims 1-6, 11-17, and 19 under 35 U.S.C. § 103(a)

Applicant respectfully traverses the rejection of claims 1, 2, 4, 5, 11, 12, 14, 15, 17, and 19 under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 6,538,249 to Takane et al. ("*Takane et al.*") and U.S. Patent No. 6,456,899 to Gleason et al. ("*Gleason et al.*"); the rejection of claims 3 and 13 under 35 U.S.C. § 103(a) as unpatentable over *Takane et al.* and *Gleason et al.*; and the rejection of claims 6 and 16 under 35 U.S.C. § 103(a) as unpatentable over *Takane et al.* and *Gleason et al.*

The key to supporting any rejection under 35 U.S.C. § 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. Such an analysis should be made explicit and cannot be premised upon mere conclusory statements. M.P.E.P. § 2142, 8th Ed., Rev. 6 (September 2007). "A conclusion of obviousness requires that the reference(s) relied upon be enabling in that it put the public in possession of the claimed invention." M.P.E.P. § 2145. "[T]he framework for objective analysis for determining obviousness under 35 U.S.C. § 103 is stated in *Graham v. John Deere Co.*, 383 U.S. 1, 148 U.S.P.Q. 459 (1966). . . . The factual inquiries . . . [include determining the scope and content of the prior art and] . . . [a]scertaining the differences between the claimed invention and the prior art." M.P.E.P § 2141(II). "Office personnel must explain why the difference(s) between the prior art and the claimed invention would have been obvious to one of ordinary skill in the art." M.P.E.P. § 2141(III).

It would not have been obvious for one of ordinary skill to combine the teachings of *Takane et al.* and *Gleason et al.* to obtain a pattern measuring apparatus comprising, inter alia, "a processor to, for each of the images, (i) scan the image, using the predetermined edge reference data, to detect edge points of the image and (ii) compare the predetermined edge reference data to the intensity values of the image at the edge points to generate a plurality of correlation values, each of the correlation values indicating a correlation between the edge reference data and the intensity value of the image at a respective edge point," as recited in independent claim 1 as amended (emphasis added).

Takane et al. teaches "obtain[ing] an image which is focused on all portions of a sample" (Abstract). "[T]wo images are captured: one in which a focal position is set on [a] surface of [a] semiconductor sample and the other in which a focal position is set on [a] bottom surface of a contact hole. Then, in-focus portions can be extracted from each image so as to produce a composite image, which is a two-dimensional image focusing on all surfaces of the sample" (col. 6, lines 8-14). "[C]omposition using n images can be performed by sequentially repeating the same process on a series of image pairs" (col. 6, lines 57-59). *Takane et al.* continues, "FIG. 11 is a schematic diagram showing a composing process according to the present invention. The figure illustrates an example in which pixel values from a Sobel filter are set as in-focus evaluation references. Like image differential, the Sobel filter is used to extract edge information of an image, and when a pixel value processed by a Sobel filter is large, this means that changes in pixel values around the pixel are large. That is, the pixel is in focus and is hardly blurred. Numeral 1101 indicates a plurality of images captured by changing a focus, and 1102 indicates images obtained by processing each image 1101 by use of a Sobel filter." (Col. 6, line 60 to col. 7, line 4).

However, *Takane et al.* does not teach or suggest "scan[ning] the image, using the predetermined edge reference data, to detect edge points of the image and . . . compar[ing] the predetermined edge reference data to the intensity values of the image at the edge points to generate a plurality of correlation values, each of the correlation values indicating a correlation between the edge reference data and the intensity value of the image at a respective edge point," as recited in claim 1.

Gleason et al. does not make up for the deficiencies of *Takane et al.* because *Gleason et al.* also fails to teach or suggest "scan[ning] the image, using the predetermined edge reference data, to detect edge points of the image and . . . compar[ing] the predetermined edge reference data to the intensity values of the image at the edge points to generate a plurality of correlation values, each of the correlation values indicating a correlation between the edge reference data and the intensity value of the image at a respective edge point," as recited in claim 1. Accordingly, *Takane et al.* and *Gleason et al.*, individually or in combination, fail to teach or suggest all elements of claim 1.

As explained above, the elements of the amended claim are neither taught nor suggested by the cited references. Moreover, there is no teaching in the cited references that would motivate one of ordinary skill in the art to modify the disclosures thereof to achieve the claimed combination. Consequently, no reason has been clearly articulated as to why the claim would have been obvious to one of ordinary skill in view of the prior art and a *prima facie* case of obviousness has not been established for independent claim 1.

Independent claims 7, 11, and 18-20 are not rendered obvious by *Takane et al.* and *Gleason et al.* for reasons substantially similar to those explained above in relation to claim 1. For example, *Takane et al.* and *Gleason et al.* fail to teach or suggest, alone or in combination, a method comprising, inter alia, "detecting edge points of each of the images by scanning the image using predetermined edge reference data" and "comparing, for each of the images, the predetermined edge reference data to the intensity values of the image at the edge points to generate a plurality of correlation

values, each of the correlation values indicating a correlation between the edge reference data and the intensity value of the image at a respective edge point," as recited in claim 11.

Thus, since *Takane et al.* and *Gleason et al.* do not render independent claims 1, 7, 11, and 18-20 obvious, these claims and claims 2-6, 8-10, and 12-17, which depend from independent claims 1, 7, and 11, are allowable over *Takane et al.* and *Gleason et al.*

New independent claims 21-26 recite scanning the image, using the pattern edge model, to detect edge points of the image and comparing the pattern edge model to the intensity values of the image at the edge points to generate a plurality of correlation values, each of the correlation values indicating a correlation between the edge reference data and the intensity value of the image at a respective edge point. Neither *Takane et al.* nor *Gleason et al* discloses or suggests these elements. Therefore, claims 21-26 are allowable over *Takane et al.* and *Gleason et al.*

CONCLUSION

In view of the foregoing, Applicant respectfully requests reconsideration of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our Deposit Account No. 06-0916.

Respectfully submitted,

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